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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,613	12/21/2001	Shoichi Kiyomoto	47258	4541
20454	7590	04/18/2006	EXAMINER	
JEFFREY C. LEW 2205 SILVERSIDE ROAD WILMINGTON, DE 19810			POLTORAK, PIOTR	
			ART UNIT	PAPER NUMBER
			2134	
DATE MAILED: 04/18/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/029,613	Applicant(s) KIYOMOTO, SHOICHI	
	Examiner Peter Poltorak	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Amendment, and remarks therein, received on 1/09/06 have been entered and carefully considered.
2. The Amendment introduces a new limitation into the originally sole independent claims 1 and 13 and dependent claims 2, 10 and 17.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

### ***Response to Amendment***

4. Applicant's arguments have been carefully.
5. As per claims 1 applicant amended claims to clarify that a digital camera comprise a corrective lens in addition to its own camera lens. As a result the 35 U.S.C. 112 second paragraph rejection is withdrawn.
6. As per claims 1 applicant argues that Steinberg does not teach a stamping area comprising a semi-transparent film and challenges motivation to combine Steinberg with Ball's disclosure of a semi-transparent film.
7. Applicant argument has been carefully considered and found persuasive. However, the new search has resulted in newly discovered prior art. New grounds of rejection based on the newly discovered prior art follow below.

### ***Claim Rejections - 35 USC § 103***

8. Claims 1, 4, 7-8, 10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099).

9. As per claims 1, 4, 7-8 and 13-14 *Steinberg et al.* teach an electronic apparatus comprising a digital camera having a camera lens (*Fig. 1*), a fingerprint reading unit having a stamping area (*Fig. 1 object 122 and Fig. 12*); and an optical system positioned in the fingerprint reading unit and comprising a lens additional to the camera lens incorporated in the digital camera (*Fig. 12*), in which the fingerprint reading unit is operative to direct an image of an object on the stamping area through the lenses for capture by the digital camera (*col. 6 line 59-col. 60 line 3 and Fig. 11-12*). *Steinberg et al.* teach capturing into the digital camera a fingerprint image of a finger in contact with the stamping area, extracting information from the fingerprint image which uniquely characterizes the fingerprint image, comparing the information extracted with the fingerprint image to pre-registered fingerprint image data, and authenticating whether the fingerprint image is the same as any image contained in the pre-registered fingerprint image data (*col. 7 lines 52-62 and col. 2 lines 31-35*). The fingerprint reading unit in *Steinberg et al.*'s invention comprises a source of light and a prism (*col. 8 lines 2-6*), a light source that is activated when an object makes contact with the stamping area (*col. 7 lines 65-67*), and the camera operation is allowed only if a user is authorized (*col. 2 lines 31-35*).

*Steinberg et al.* do teach that the stamping area comprises a semi-transparent film. *Teng* discloses potential problems with glass stamping area (*Teng, last paragraph on pg. 3*) and suggest applying semi-transparent film (*Teng, polymer, Fig. 7 and last paragraph on pg. 9*).

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate a semi-transparent film as taught by *Teng* into *Steinberg et al.*'s invention given the benefit of the clarity of the fingerprint reading.

10. As per claim 10 *Steinberg et al.* in view of *Teng* do not explicitly teach the apparatus that comprises a pinhole diaphragm positioned between the corrective lens of the optical system and the camera lens.

Official Notice is taken that it is old and well-known practice to use a pinhole diaphragm positioned between the corrective lens of the optical system and the camera lens to capture images using lenses. One of ordinary skill in the art at the time of applicant's invention would have been motivated to employ a pinhole diaphragm positioned between the corrective lens of the optical system and the camera lens to control the amount of light input to have the most desirable film exposure.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and further in view of *Frieder et al.* (U.S. Patent No. 4846913).

*Steinberg et al.* in view of *Teng* teach the apparatus as discussed above.

As per claim 2 *Steinberg et al.* in view of *Teng* do not explicitly teach the apparatus in which the lens of the optical system has a configuration adapted to implement hyperopia correction to the image.

Frieder et al. teach hyperopia correction to an image (col. 6 line 23). One of ordinary skill in the art at the time of applicant's invention would have been motivated to employ hyperopia correction to the image in order to offer a clearer image.

12. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and further in view of *Rios* (International Pub. WO 9319433). *Steinberg et al.* in view of *Teng* teaching of an electronic apparatus with the stamping area comprising a polymer film was discussed supra.

Implementing a light shield to block a peripheral portion of the light from the source from reaching the digital camera is implicit.

However, *Steinberg et al.* in view of *Teng* do not teach that the source of light comprises a window adapted to admit external ambient light into the fingerprint reading unit and that the fingerprint reading unit further comprises a light shield operative to block a peripheral portion of the light from the source from reaching the digital camera.

*Rios* teaches a window adapted to admit external ambient light (*Fig. 2 object 30 and pg. 3 last paragraph*).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement a window adapted to admit external ambient light into the fingerprint reading unit as taught by *Rios*. One of ordinary skill in the art would have been motivated to admit external ambient light into the fingerprint reading unit in order to diffuse light to a fingerprinted finger uniformly.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and further in view of *Morrison* (Gale Morrison, "Electronic News, (1991) v44, n2201, p6(1) Jan 12, 1998).

*Steinberg et al.* in view of *Teng* teach the electronic apparatus as discussed above.

*Steinberg et al.* in view of *Teng* do not teach that the source of light comprises a light-emitting polymer emitting light in response to pressure from contact by an object against the polymer film.

*Morrison* teaches a source of light comprises a light-emitting polymer emitting light in response to pressure from contact by an object against the polymer film (*Morrison*, pg. 1).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a source of light that comprises a light-emitting polymer emitting light in response to pressure from contact by an object against the polymer film as taught by *Morrison* in *Steinberg et al.*'s invention. One of ordinary skill in the art would have been motivated to use a source of light that comprises a light-emitting polymer emitting light in response to pressure from contact by an object against the polymer film in order to allow better capture of a fingerprint image.

14. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and further in view of *Siddoway et al.* (U.S. Patent No. 6473631).  
*Steinberg et al.* in view of *Teng* each the electronic apparatus as discussed supra.

*Steinberg et al.* in view of *Teng* do not teach the apparatus that comprise a wireless telephone (*Abstract*).

*Siddoway et al.* teach an apparatus that comprises a wireless telephone.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement the invention as taught by *Steinberg et al.* in an apparatus that comprise a wireless telephone as taught by *Siddoway et al.* given the benefit of assurance that the wireless telephone is used only by authorized users.

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and further in view of *Stewart et al.* (U.S. Patent No. 5898438).

*Steinberg et al.* in view of *Teng* teach the electronic apparatus as discussed supra. Using the corrected (cleaned) image to authenticate a user would have been implicit. However, *Steinberg et al.* in view of *Teng* do not teach correcting the fingerprint image to remove distortion.

*Stewart et al.* teach correcting an image to remove distortion (*col. 4 lines 46-60*).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to correct an image to remove distortion as taught by *Stewart et al.* given the benefit of obtaining a more accurate reading.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and *Stewart et al.* (U.S. Patent No. 5898438) and in further view of *Nyyssonen* (U.S. Patent No. 5633714).



*Steinberg et al.* in view of *Stewart et al.* teach the electronic apparatus that corrects the fingerprint image to remove distortion as discussed above.

*Steinberg et al.* in view of *Stewart et al.* do not teach determining a Fourier transform function and applying inverse Fourier transform process to form the cleaned fingerprint image.

*Nyyssonen* teach determining a Fourier transform function and applying an inverse Fourier transform process to form a cleaned image (*col. 8 lines 56-63*).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to determine a Fourier transform function and applying inverse Fourier transform process to form the cleaned fingerprint image as taught by *Nyyssonen* given the benefit of obtaining a high contrast clear image.

17. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Steinberg et al.* (U.S. Patent No. 6433818) in view of *Teng* (International Pub. No. WO 0038099) and *Stewart et al.* (U.S. Patent No. 5898438) and further in view of *Frieder et al.* (U.S. Patent No. 4846913).

*Steinberg et al.* in view of *Teng* teach an optical system positioned in the fingerprint reading unit (*Steinberg, Fig. 1*).

Furthermore, claim 17 introduces the limitation substantially equivalent to the limitation of claim 2; these limitations are similarly rejected.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)

272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques can be reached on (571)272-6962. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
4/1/06

  
JACQUES H. LOUIS  
PATENT EXAMINER